Math
Grade 5

Course Description:

The 5th grade mathematics curriculum is aligned with the New Jersey Student Learning Standards and follows the concrete, pictorial, abstract model of instruction. Instruction for new concepts will utilize manipulatives, lead to drawings, and finally utilize algorithms to solve problems. Students will develop their ability to make sense of problems and persevere in solving them, reason abstractly, construct arguments and critique others, model mathematically, attend to precision, and use repeated reasoning. An understanding of the course material will be demonstrated by participating in homework, group and individual class work, quizzes, tests, independent problem solving, and Calendar Math discussions.

The Grade 5 standards focus on following areas: place value; multiplication; division; fractions; area, perimeter, and volume; decimals; and geometry. The three essential areas include: (1) developing fluency when completing operations with fractions; (2)extending division of multidigit numbers to 2-digit divisors, understanding decimals and how they are added into the place value system, completing operations with decimals; and (3) developing an understanding of volume.

Course Sequence

Unit Title	Pacing
Unit 1: Place Value	22 days
Unit 2: Multiplication	18 days
Unit 3: Division	40 days
Unit 4: Fractions	54 days
Unit 5: Perimeter, Area, & Volume	13 days
Unit 6: Decimals	10 days
Unit 7: Calendar Math	Full Year
State Testing, SGO, Re-Teach, Field Trips, Assemblies, etc	26 days

Prerequisite:

Grade 4 Math

Place Value Unit 1 - Overview	
Content Area: Math	
Unit Title: Place Value	
Grade Level: 5	
Unit Summary: Students will develop an understanding of the place value system through the billions period, and connect that one digit represents 10 times as much as its place value to the right and 1/10 of what it represents in the place value to the left. The instructional time will focus on developing fluency with addition and subtraction of multi-digit numbers as well as evaluating numerical expressions using order of operations.	
Place Value Unit 1 - Standards	
Standards (Content and Technology)**:**	
CPI#:	**Statement:**
NJSLS Standards	
5.NBT.A.1	Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.
5.OA.A.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols
5.OA.A.2	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.
5.OA.B.3	Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.
SMP.1	Make sense of problems and persevere in solving them.
SMP.2	Reason abstractly and quantitatively
SMP.3	Construct viable arguments and critique the reasoning of others
SMP.4	Model with mathematics.
SMP.5	Use appropriate tools strategically.
SMP.6	Attend to precision.
SMP.7	Look for and make use of structure.
SMP.8	Look for and express regularity in repeated reasoning.
21st century themes and skills (standard 9)	
9.1.4.A.3	Explain how income affects spending and take-home pay.
9.1.8.A.2	Relate how career choices, education choices, skills, entrepreneurship, and economic conditions affect income.
9.1.8.A.6	Explain how income affects spending decisions.
9.1.4.B.3	Explain what a budget is and why it is important.
9.1.8.E.6	Compare the value of goods or services from different sellers when purchasing large quantities and small quantities.
Career Ready Practices	
CRP2.	Apply appropriate academic and technical skills.
CRP3.	Attend to personal health and financial well-being.
CRP4.	Communicate clearly and effectively and with reason.
CRP8.	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP10.	Plan Education and career paths aligned to personal goals.
CRP11.	Use technology to enhance productivity.
CRP12.	Work productively in teams while using cultural global competence.
Educational Technology Standards	
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.

8.1.5.F.1	Apply digital tools to collect, organize, and analyze data that support a scientific finding.
Interdisciplinary Connection	
NJSLSA.SL.5.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
NJSLSA.SL.4	Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
NJSLSA.SL2.	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally
NJSLSA.W4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Unit Essential Question(s):

- How can you describe the relationship between two place-value positions?
- How do you read, write, and represent whole numbers through hundred millions?
- How can you use properties of operations to solve problems?
- How can you use an exponent to show powers of 10?

Unit Enduring Understandings:

- Students recognize the 10 to 1 relationship among place-value positions.
- Students read and write whole numbers through hundred millions.
- Students use properties of operations to solve problems.
- Write and evaluate repeated factors in exponential form.

Unit Learning Targets/Objectives:

Students will…

- Recognize the 10 to 1 relationship among place-value positions.
- Read and write whole numbers through hundred millions.
- Use properties of operations to solve problems.
- Write and evaluate repeated factors in exponential form.

Evidence of Learning

Formative Assessments: entrance slips, exit slips, dry erase board practice, homework collection, task cards, participation, teacher observation

Summative/Benchmark Assessment(s): quizzes, end of unit test

Alternative Assessments: modified versions of formative and summative assessments, project based assessment, oral assessment

Resources/Materials : curriculum binders, curriculum calendars, SMART board, math textbook, Every Day Counts Calendar Math, online resources such as IXL, Prodigy, Reflex, math manipulatives

Modifications:

- Special Education Student/504 -
  - Rephrase questions, directions, and explanations
  - Allow extended time to answer questions, and permit drawing, as an explanation
  - Accept participation at any level, even one word
  - Consult with Case Managers and follow IEP accommodations/modifications
  - Allow errors
- English Language Learners -
  - Allow errors in speaking
  - Rephrase questions, directions, and explanations
  - Allow extended time to answer questions
  - Accept participation at any level, even one word
  - Assign a buddy, same language or English
- At-Risk Students -
  - Provide extended time to complete tasks
  - Consult with Guidance Counselors and follow I&RS procedures/action plans
  - Consult with classroom teacher(s) for specific behavior interventions
  - Provide rewards as necessary
  - Small group instruction
- Gifted and Talented Students- –
  - Provide extension activities
  - Build on students' intrinsic motivation
  - Consult with parents to accommodate students' interests in completing tasks at their level of engagement

speaking

Suggested Pacing Guide		
Lesson Name/Topic	**Lesson Objective(s)**	**Time frame (day(s) to complete)**
Introduction to Math	Students will be able to: • Make connections between numbers and the number line. • Identify and define number line vocabulary/	4 days
Place Value	Students will be able to: ● Identify place value periods to a billion. ● Read and write numbers to the billions. ● Write numbers in standard form, expanded notation, and word form. ● Order and compare numbers to the billions. ● Round numbers to the decided place value.	11 days
Exponents	Students will be able to: ● Identify exponents. ● Explain the meaning of an exponent. ● Represent whole numbers using exponents. ● Understand that any number to the zero power is meaningless. ● Write numbers in expanded notation.	7 days
Teacher Notes: Use the term "rolling 9s" when talking about a number such as 19,984 rounded to the hundreds place. Spiral place value questions and value questions making the students distinguish between the two.		
Additional Resources: One Grain of Rice by Demi, place value blocks, "One in a Million" chart made by the previous 4th grade		

Multiplication Unit 2 - Overview	
Content Area: Math	
Unit Title: Multiplication	
Grade Level: 5	
Unit Summary: Students will develop fluency in multiplying multi-digit whole numbers using area model, partial products, and the standard algorithm. Students will develop fluency within multiplication and make reasonable estimates of their results.	

Multiplication Unit 2 - Standards	
Standards (Content and Technology)**:**	
CPI#:	**Statement:**
NJSLS Standards	
5.NBT.B.5	Fluently multiply multi-digit whole numbers using the standard algorithm.
SMP.1	Make sense of problems and persevere in solving them.
SMP.2	Reason abstractly and quantitatively
SMP.3	Construct viable arguments and critique the reasoning of others
SMP.4	Model with mathematics.
SMP.5	Use appropriate tools strategically.
SMP.6	Attend to precision.
SMP.7	Look for and make use of structure.
SMP.8	Look for and express regularity in repeated reasoning.
21st century themes and skills (standard 9)	
9.1.4.A.3	Explain how income affects spending and take-home pay.
9.1.8.A.2	Relate how career choices, education choices, skills, entrepreneurship, and economic conditions affect income.
9.1.8.A.6	Explain how income affects spending decisions.
9.1.8.E.6	Compare the value of goods or services from different sellers when purchasing large quantities and small quantities.
9.2.8.B.3	Evaluate communication, collaboration, and leadership skills that can be developed through school, home, work, and extracurricular activities for use in a career.
Career Ready Practices	
CRP2.	Apply appropriate academic and technical skills.
CRP3.	Attend to personal health and financial well-being.
CRP4.	Communicate clearly and effectively and with reason.
CRP8.	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP10.	Plan education and career paths aligned to personal goals.
CRP11.	Use technology to enhance productivity.
CRP12.	Work productively in teams while using cultural global competence.
Educational Technology Standards	
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
Interdisciplinary Connection	
NJSLSA.SL.5.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
NJSLSA.SL4	Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
NJSLSA.SL2.	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally
NJSLSA.W4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Unit Essential Question(s):	**Unit Enduring Understandings:**
● How you use basic fact and a pattern to multiply by a 2 digit number? ● How do you utilize the standard algorithm to multiply	● Students identify patterns and utilize basic facts to multiply mentally by 10, 100, and 1000. ● Students multiply using the standard algorithm.

multi-digit numbers? ● How do you utilize partial products to multiply multi-digit numbers? ● How do you utilize the area model to break down multi-digit numbers in order to multiply them.	● Students multiply by using partial products. ● Students multiply by breaking down numbers and applying the area model strategy.

Unit Learning Targets/Objectives:

Students will…

- Identify patterns and utilize basic facts to multiply mentally by 10, 100, and 1000.
- Multiply using the standard algorithm.
- Multiply using partial products.
- Multiply by breaking down numbers and applying the area model strategy.

Evidence of Learning

Formative Assessments: entrance slips, exit slips, dry erase board practice, homework collection, task cards, participation, teacher observation

Summative/Benchmark Assessment(s): quizzes, end of unit test

Alternative Assessments: modified versions of formative and summative assessments, project based assessment, oral assessment

Resources/Materials : curriculum binders, curriculum calendars, SMART board, math textbook, Every Day Counts Calendar Math, online resources such as IXL, Prodigy, Reflex, math manipulatives

Modifications:

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  - Allow extended time to answer questions, and permit drawing, as an explanation
  - Accept participation at any level, even one word
  - Consult with Case Managers and follow IEP accommodations/modifications
  - Allow errors
  - Multiplication charts
  - Checklist of steps
- English Language Learners -
  - Allow errors in speaking
  - Rephrase questions, directions, and explanations
  - Allow extended time to answer questions
  - Accept participation at any level, even one word
  - Assign a buddy, same language or English speaking
- At-Risk Students -
  - Provide extended time to complete tasks
  - Consult with Guidance Counselors and follow I&RS procedures/action plans
  - Consult with classroom teacher(s) for specific behavior interventions
  - Provide rewards as necessary
  - Checklist of steps
- Gifted and Talented Students- –
  - Provide extension activities
  - Build on students' intrinsic motivation
  - Consult with parents to accommodate students' interests in completing tasks at their level of engagement

Suggested Pacing Guide

Lesson Name/Topic	Lesson Objective(s)	Time frame (day(s) to complete)
Introduction to Multiplication	Students will be able to: ● Draw arrays for all numbers up to 30. ● Identify characteristics of square numbers. ● Identify properties of multiplication and addition. ● Describe patterns when numbers are multiplied by multiples of 10. ● Utilize estimation to check the reasonableness of their calculations.	7 days
Multiplying Multi Digit Numbers	Students will be able to: ● Utilize the partial product method to multiply multi digit numbers. ● Utilize the traditional algorithm to multiply multi digit	11 days

	numbers. ● Utilize the area model to multiply multi digit numbers. ● Utilize different strategies to solve multiplication word problems.	
Teacher Notes: Utilize the BLS strategy every time a word problem is solved so that it becomes automatic. Calendar Math review and quiz incorporated into the end of this unit.		
Additional Resources: graph paper, Math Antics videos		

Division Unit 3 - Overview	
Content Area: Math	
Unit Title: Division	
Grade Level: 5	
Unit Summary: Students will extend their knowledge of division to find whole-number quotients of whole numbers with up to four-digit dividends and two digit divisors using the "Tower Up" method and the standard division algorithm. Students will develop fluency within division and make reasonable estimates of their results.	
Division Unit 3 - Standards	
Standards (Content and Technology)**:**	
CPI#:	**Statement:**
NJSLS Standards	
5.NBT.B.6	Find whole-number quotients of whole numbers with up to four-digit dividends and two digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
SMP.1	Make sense of problems and persevere in solving them.
SMP.2	Reason abstractly and quantitatively
SMP.3	Construct viable arguments and critique the reasoning of others
SMP.4	Model with mathematics.
SMP.5	Use appropriate tools strategically.
SMP.6	Attend to precision.
SMP.7	Look for and make use of structure.
SMP.8	Look for and express regularity in repeated reasoning.
21st century themes and skills (standard 9)	
9.1.8.E.6	Compare the value of goods or services from different sellers when purchasing large quantities and small quantities.
9.2.8.B.3	Evaluate communication, collaboration, and leadership skills that can be developed through school, home, work, and extracurricular activities for use in a career.
Career Ready Practices	
CRP2.	Apply appropriate academic and technical skills.
CRP3.	Attend to personal health and financial well-being.
CRP4.	Communicate clearly and effectively and with reason.
CRP8.	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP10.	Plan education and career paths aligned to personal goals.
CRP11.	Use technology to enhance productivity.
CRP12.	Work productively in teams while using cultural global competence.
Educational Technology Standards	
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
Interdisciplinary Connection	
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NJSLSA.SL2.	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally
NJSLSA.W4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Unit Essential Question(s):	**Unit Enduring Understandings:**
● How do divisibility rules help aide in the division process? ● What is the meaning of division? ● How are remainders interpreted?	● Students identify three divisibility rules. ● Division is fair sharing and equal groups. ● Students interpret remainders depending on the type of question being asked.

● How do patterns help us divide mentally? ● How do compatible numbers help to estimate quotients? ● What methods can be used to solve multi-digit division problems? ● What strategies can be used to solve division word problems?	● Students identify patterns and utilize basic facts to multiply mentally by 10, 100, and 1000. ● Compatible numbers help to estimate quotients. ● Students use the tower up method and the traditional algorithm to solve multi-digit division problems. ● Students will utilize interpreting remainder strategies and different division methods to solve word problems.

Unit Learning Targets/Objectives:

Students will…

- Identify three divisibility rules and use them appropriately.
- Distinguish between fair sharing and equal groups.
- Interpret remainders correctly.
- Identify patterns and utilize basic facts to multiply mentally by 10, 100, and 1000.
- Utilize compatible numbers to estimate quotients.
- Utilize the tower up method and the traditional algorithm to solve multi-digit division problems.
- Utilize various division strategies to successfully solve division word problems.

Evidence of Learning

Formative Assessments: entrance slips, exit slips, dry erase board practice, homework collection, task cards, participation, teacher observation

Summative/Benchmark Assessment(s): quizzes, end of unit test

Alternative Assessments: modified versions of formative and summative assessments, project based assessment, oral assessment

Resources/Materials : curriculum binders, curriculum calendars, SMART board, math textbook, Every Day Counts Calendar Math, online resources such as IXL, Prodigy, Reflex, math manipulatives

Modifications:

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  - Rephrase questions, directions, and explanations
  - Allow extended time to answer questions, and permit drawing, as an explanation
  - Accept participation at any level, even one word
  - Consult with Case Managers and follow IEP accommodations/modifications
  - Allow errors
  - Checklist of steps
  - Multiplication chart
- English Language Learners -
  - Allow errors in speaking
  - Rephrase questions, directions, and explanations
  - Allow extended time to answer questions
  - Accept participation at any level, even one word
- At-Risk Students -
  - Provide extended time to complete tasks
  - Consult with Guidance Counselors and follow I&RS procedures/action plans
  - Consult with classroom teacher(s) for specific behavior interventions
  - Small group instruction
  - Checklist of steps
- Gifted and Talented Students- –
  - Provide extension activities
  - Build on students' intrinsic motivation
  - Consult with parents to accommodate students' interests in completing tasks at their level of engagement
  - Provide enrichment activities

Suggested Pacing Guide

Lesson Name/Topic	Lesson Objective(s)	Time frame (day(s) to complete)
Divisibility Rules	Students will be able to: ● Utilize divisibility rules to divide numbers efficiently.	2 days
Introduction to Division	Students will be able to: ● Label problems fair share and equal groups ● Identify and utilize different formats of division	2 days
Interpreting Remainders	Students will be able to: ● Solve division word problems and interpret remainders.	2 days
Division	Students will be able to: ● Estimate to determine whether their division is reasonable.	16 days

	● Identify the pattern when dividing by multiples of 10. ● Utilize the tower up method to solve multi digit division problems ● Utilize the traditional method to solve multi digit division problems. ● Utilize problem solving skills to solve division word problems.	
Calendar Math	Students will be able to: ● Demonstrate knowledge of calendar math concepts.	8 days
Teacher Notes: Utilize the BLS strategy every time a word problem is solved so that it becomes automatic.		
Additional Resources: graph paper, Math Antics videos		

Fractions Unit 4 - Overview	
Content Area: Math	
Unit Title: Fractions	
Grade Level: 5	
Unit Summary: Students will expand their understanding of equivalent fractions and mixed numbers. Students will utilize strategies of common numerator, common denominator, benchmark to $\frac{1}{2}$, complements to 1, number sense, and common denominators in order to compare fractions. Students will expand their understanding of adding and subtracting fractions from like denominators to unlike denominators with and without regrouping. Students will develop an understanding of multiplying fractions using the pictures and algorithms. Students will develop an understanding of dividing fractions by drawing pictures to represent the division.	
Fractions Unit 4 - Standards	
Standards (Content and Technology)**:**	
CPI#:	**Statement:**
NJSLS Standards	
5.NF.A.1	Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)
5.NF.A.2	Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.
5.NF.B.3	Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?
5.NF.B.4a	Interpret the product (a/b) × q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a × q ÷ b. For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.)
5.NF.B.5a	Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
5.NF.B.5b	Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence a/b = (n×a)/(n×b) to the effect of multiplying a/b by 1.
5.NF.B.6	Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem
5.NF.B.7a	Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.
5.NF.B.7b	Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20because 20 × (1/5) = 4.
5.NF.B.7c	Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?
5.MD.B.2	Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use

	operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.
SMP.1	Make sense of problems and persevere in solving them.
SMP.2	Reason abstractly and quantitatively
SMP.3	Construct viable arguments and critique the reasoning of others
SMP.4	Model with mathematics.
SMP.5	Use appropriate tools strategically.
SMP.6	Attend to precision.
SMP.7	Look for and make use of structure.
SMP.8	Look for and express regularity in repeated reasoning.
21st century themes and skills (standard 9)	
9.1.8.E.1	Explain what it means to be a responsible consumer and the factors to consider when making consumer decisions.
Career Ready Practices	
CRP2.	Apply appropriate academic and technical skills.
CRP3.	Attend to personal health and financial well-being.
CRP4.	Communicate clearly and effectively and with reason.
CRP8.	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP10.	Plan education and career paths aligned to personal goals.
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Educational Technology Standards	
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
Interdisciplinary Connection	
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NJSLSA.SL2.	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally
NJSLSA.W4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Unit Essential Question(s):	**Unit Enduring Understandings:**
● How do we break down numbers using prime factorization? ● What are fractions? ● How do we locate fractions on a number line? ● What are equivalent fractions ● How do we simplify fractions so that they are represented in the lowest terms? ● How can we compare fractions? ● How can we add fractions with common denominators and without common denominators? ● How can we subtract fractions with common denominators and without common denominators? ● How can we multiply fractions? ● How can we use a diagram to divide unit fractions? ● How can we analyze the products of fractions?	● Students utilize prime factorization to break down numbers. ● Students will define fractions ● Students will locate fractions on a number line. ● Students will define equivalent fractions. ● Students will simplify fractions. ● Students will compare fractions ● Students will add fractions with common denominators and without common denominators. ● Students will subtract fractions with common denominators and without common denominators. ● Students will multiply fractions. ● Students will utilize a diagram to divide unit fractions. ● Students will identify the rules associated with analyzing products of fractions.
Unit Learning Targets/Objectives: *Students will…*	

- Utilize prime factorization to find the GCF and LCM of two numbers.
- Define fractions.
- Locate fractions on a number line.
- Define equivalent fractions.
- Simplify fractions to lowest terms.
- Compare fractions using multiple strategies.
- Add fractions and mixed numbers with common denominators.
- Find common denominators in order to add fractions and mixed numbers.
- Subtract fractions and mixed numbers with common denominators with and without regrouping.
- Find common denominators in order to subtract fractions with and without regrouping.
- Multiply fractions utilizing a diagram and a standard algorithm.
- Divide unit fractions utilizing a diagram.
- Analyze products of fractions.

Evidence of Learning

Formative Assessments: entrance slips, exit slips, dry erase board practice, homework collection, task cards, participation, teacher observation
Summative/Benchmark Assessment(s): quizzes, end of unit test
Alternative Assessments: modified versions of formative and summative assessments, project based assessment, oral assessment
Resources/Materials : curriculum binders, curriculum calendars, SMART board, math textbook, Every Day Counts Calendar Math, online resources such as IXL, Prodigy, Reflex, math manipulatives

Modifications:

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  - Consult with Case Managers and follow IEP accommodations/modifications
  - Allow errors
  - Fraction Manipulatives
- English Language Learners -
  - Allow errors in speaking
  - Rephrase questions, directions, and explanations
  - Allow extended time to answer questions
  - Accept participation at any level, even one word
  - Assign a buddy, same language or English speaking
- At-Risk Students -
  - Provide extended time to complete tasks
  - Consult with Guidance Counselors and follow I&RS procedures/action plans
  - Consult with classroom teacher(s) for specific behavior interventions
  - Provide rewards as necessary
  - Fraction Manipulatives
- Gifted and Talented Students- –
  - Provide extension activities
  - Build on students' intrinsic motivation
  - Consult with parents to accommodate students' interests in completing tasks at their level of engagement
  - Extend concept further with more difficult and complex problems.

Suggested Pacing Guide

Lesson Name/Topic	Lesson Objective(s)	Time frame (day(s) to complete)
Prime Factorization, GCF, LCM	Students will be able to: ● Utilize prime factorization to break down numbers. ● Utilize the cake method to determine the greatest common factor (GCF) of two numbers. ● Utilize the cake method to determine the least common multiple (LCM) of two numbers.	8 days
Introduction to Fractions	Students will be able to: ● Describe the meaning of fractions. ● Locate fractions on a number line. ● Identify equivalent fractions as fractions that are located on the same point on a number line. ● Simplify fractions to lowest terms.	18 days

	● Change improper fractions to mixed numbers and mixed numbers to improper fractions.	
Comparing Fractions	Students will be able to: ● Compare fractions with like denominators. ● Compare fractions with like numerators. ● Compare fractions by benchmarking to $\frac{1}{2}$. ● Compare fractions by finding complements to 1.	7 days
Addition and Subtraction of Fractions	Students will be able to: ● Add fractions with like denominators. ● Add mixed numbers with like denominators. ● Subtract fractions with like denominators. ● Subtract mixed numbers with like denominators with regrouping. ● Add fractions with unlike denominators when one denominators is a multiple of the other. ● Subtracting unlike denominators with the denominator is a multiple of the other with and without regrouping. ● Find a common denominator when adding and subtracting fractions when one denominator is not a multiple of the other. ● Utilize problem solving strategies to solve addition and subtraction of fractions word problems.	9 days
Multiplying Fractions	Students will be able to: ● Multiply fractions and whole numbers ● Multiply fractions and fractions using a diagram and standard algorithm	4 days
Dividing Fractions	Students will be able to: ● Divide whole numbers by unit fractions using a diagram ● Solve word problems utilize multiplication and division of fractions strategies.	6 days
Analyzing products with Fractions	Students will be able to: ● Analyze the products of fractions ● Demonstrate an understanding of the product and how it relates to the problem presented.	2 day
Teacher Notes: When teacher prime factorization we utilize the "cake method" which builds going up like a tiered cake. When subtracting mixed numbers with like and unlike denominators with regrouping, the term used is "going to the bank".		
Additional Resources: fraction shapes, fraction shape reference card, fraction strips, fraction tiles, number lines		

Perimeter, Area & Volume Unit 5 - Overview	
Content Area: Math	
Unit Title: Perimeter, Area & Volume	
Grade Level: 5	
Unit Summary: Students will expand their understanding of area and perimeter by creating linear models, decomposing figures and finding the area of fractional sides.	
Perimeter, Area & Volume Unit 5 - Standards	
Standards (Content and Technology)**:**	
CPI#:	**Statement:**
NJSLS Standards	
5.NF.B.4b	Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.
5.MD.C.3a	A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.
5.MD.C.3b	A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units
5.MD.C.4	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units
5.MD.C.5a	Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.
5.MD.C.5b	Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.
5.MD.C.5c	Recognize volume as additive. Find volumes of solid figures composed of two non overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.
SMP.1	Make sense of problems and persevere in solving them.
SMP.2	Reason abstractly and quantitatively
SMP.3	Construct viable arguments and critique the reasoning of others
SMP.4	Model with mathematics.
SMP.5	Use appropriate tools strategically.
SMP.6	Attend to precision.
SMP.7	Look for and make use of structure.
SMP.8	Look for and express regularity in repeated reasoning.
21st century themes and skills (standard 9)	
9.1.8.E.1	Explain what it means to be a responsible consumer and the factors to consider when making consumer decisions.
Career Ready Practices	
CRP2.	Apply appropriate academic and technical skills.
CRP3.	Attend to personal health and financial well-being.
CRP4.	Communicate clearly and effectively and with reason.
CRP8.	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP10.	Plan education and career paths aligned to personal goals.
CRP11.	Use technology to enhance productivity.
CRP12.	Work productively in teams while using cultural global competence.
Educational Technology Standards	
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
Interdisciplinary Connection	
NJSLSA.SL.5.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.

NJSLSA.SL4	Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
NJSLSA.SL2.	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally
NJSLSA.W4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Unit Essential Question(s):

- What is perimeter?
- How can we determine the perimeter of a rectangle?
- What is area?
- How can we determine the area of a rectangle?
- How can we take complex figures apart to find the area.
- Determine the area of a figure that is a fraction of the original area.
- What is volume?
- How can we determine the volume of a rectangular prism?

Unit Enduring Understandings:

- Students will define perimeter.
- Students will determine the perimeter of a rectangle.
- Students will define area.
- Students will determine the area of a rectangle.
- Students will decompose complex figures to find the area.
- Students will determine the area of a figure that is a fraction of the figure's original area.
- Students will define volume.
- Students will determine the volume of a rectangular prism.

Unit Learning Targets/Objectives:

Students will…

- Define perimeter
- Utilize the algorithm to find the perimeter of a rectangle
- Define area
- Utilize the algorithm to find the area of a rectangle
- Decompose figures into rectangles in order to find the area of a more complex figure
- Define volume
- Utilize two different algorithms to determine volume

Evidence of Learning

Formative Assessments: entrance slips, exit slips, dry erase board practice, homework collection, task cards, participation, teacher observation

Summative/Benchmark Assessment(s): quizzes, end of unit test

Alternative Assessments: modified versions of formative and summative assessments, project based assessment, oral assessment

Resources/Materials : curriculum binders, curriculum calendars, SMART board, math textbook, Every Day Counts Calendar Math, online resources such as IXL, Prodigy, Reflex, math manipulatives

Modifications:

- Special Education Student/504 -
  - Rephrase questions, directions, and explanations
  - Allow extended time to answer questions, and permit drawing, as an explanation
  - Accept participation at any level, even one word
  - Consult with Case Managers and follow IEP accommodations/modifications
  - Allow errors
  - Use of manipulatives
- English Language Learners -
  - Allow errors in speaking
  - Rephrase questions, directions, and explanations
  - Allow extended time to answer questions
  - Accept participation at any level, even one word
- At-Risk Students -
  - Provide extended time to complete tasks
  - Consult with Guidance Counselors and follow I&RS procedures/action plans
  - Consult with classroom teacher(s) for specific behavior interventions
  - Provide rewards as necessary
  - Use of manipulatives
- Gifted and Talented Students- –
  - Provide extension activities
  - Build on students' intrinsic motivation
  - Consult with parents to accommodate students' interests in completing tasks at their level of engagement
  - Include more extensive complex figures for

- Assign a buddy, same language or English speaking
- decomposing
- Extend concept further with more difficult and complex problems.

Suggested Pacing Guide

Lesson Name/Topic	Lesson Objective(s)	Time frame (day(s) to complete)
Perimeter	Students will be able to: ● Define perimeter ● Utilize the standard algorithm to find the perimeter of a rectangle.	2 day
Area	Students will be able to: ● Define area ● Utilize the standard algorithm to find the area of a rectangle ● Decompose complex figures to find the total area of the figure ● Determine the area of fractional sides	4 days
Volume	Students will be able to: ● Define volume ● Utilize the algorithm length x width x height to find the volume ● Utilize the algorithm B x height to find the volume	7 days

Teacher Notes: When introducing perimeter, refer to using the toothpicks in 4th grade and the top bottom, top bottom procedure to laying them out.
Utilize unifix cubes to create complex figures that can be decomposed into rectangular prisms to find volume.
Stress the formulas for volume are: Length times Width times Height OR Base time Height (big B times height)

Additional Resources: unifix cubes, tooth picks, red inch square and green quarter inch squares are to be used for area of fractional sides

Decimals Unit 6 - Overview	
Content Area: Math	
Unit Title: Decimals	
Grade Level: 5	
Unit Summary: Students will expand their understanding of the place value system through the thousandths period, and connect that one digit represents 10 times as much as its place value to the right and one tenth of what it represents in the place value to the left. Students will develop their understanding of decimals by adding and subtracting decimals to the thousandths place. Students will order and compare decimals on a number line and round decimals to the correct place value. Students will multiply decimals using pictures and the standard algorithm and divide decimals utilizing a model.	
Decimals Unit 6 - Standards	
Standards (Content and Technology)**:**	
CPI#:	**Statement:**
NJSLS Standards	
5.NBT.A.2	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.
5.NBT.A.3a	Read, write, and compare decimals to thousandths. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$
5.NBT.A.3b	Read, write, and compare decimals to thousandths. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
5.NBT.A.4	Use place value understanding to round decimals to any place.
5.NBT.B.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.
SMP.1	Make sense of problems and persevere in solving them.
SMP.2	Reason abstractly and quantitatively
SMP.3	Construct viable arguments and critique the reasoning of others
SMP.4	Model with mathematics.
SMP.5	Use appropriate tools strategically.
SMP.6	Attend to precision.
SMP.7	Look for and make use of structure.
SMP.8	Look for and express regularity in repeated reasoning.
9.1.8.E.1	Explain what it means to be a responsible consumer and the factors to consider when making consumer decisions.
Career Ready Practices	
CRP2.	Apply appropriate academic and technical skills.
CRP3.	Attend to personal health and financial well-being.
CRP4.	Communicate clearly and effectively and with reason.
CRP8.	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP10.	Plan education and career paths aligned to personal goals.
CRP11.	Use technology to enhance productivity.
CRP12.	Work productively in teams while using cultural global competence.
Educational Technology Standards	
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
Interdisciplinary Connection	
NJSLSA.SL.5.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
NJSLSA.SL4	Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
NJSLSA.SL2.	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally
NJSLSA.W4	Produce clear and coherent writing in which the development, organization, and style are appropriate to

	task, purpose, and audience.

Unit Essential Question(s):	**Unit Enduring Understandings:**
● What are decimals? ● How do decimals relate to fractions? ● How to we write decimals in different forms? ● How do we add and subtract decimals? ● How do we multiply decimals and what does that look like as a diagram? ● How do we divide decimals using a diagram? ● How does place value play a role in decimals?	● Students will define decimals. ● Students will relate decimals to fractions. ● Students will write decimals in different forms. ● Students will add and subtract decimals correctly. ● Students will multiply decimals using an algorithm and a diagram. ● Students will divide decimals using a diagram. ● Students will describe how place value plays a role in decimals.

Unit Learning Targets/Objectives:

Students will…

- Define decimals.
- Write decimals in standard form, word form, and expanded notation.
- Identify the relationship between fractions and decimals.
- Compare, order, and round decimals and place them on a number line.
- Add and subtract decimals.
- Multiply decimals using an algorithm and a drawing.
- Identify the correct picture that relates to a decimal multiplication problem.
- Draw and identify the correct picture for a division of decimal problem (fair share and equal groups).

Evidence of Learning

Formative Assessments: entrance slips, exit slips, dry erase board practice, homework collection, task cards, participation, teacher observation

Summative/Benchmark Assessment(s): quizzes, end of unit test

Alternative Assessments: modified versions of formative and summative assessments, project based assessment, oral assessment

Resources/Materials : curriculum binders, curriculum calendars, SMART board, math textbook, Every Day Counts Calendar Math, online resources such as IXL, Prodigy, Reflex, math manipulatives

Modifications:

- Special Education Student/504 -
  - Rephrase questions, directions, and explanations
  - Allow extended time to answer questions, and permit drawing, as an explanation
  - Accept participation at any level, even one word
  - Consult with Case Managers and follow IEP accommodations/modifications
  - Allow errors
- English Language Learners -
  - Allow errors in speaking
  - Rephrase questions, directions, and explanations
  - Allow extended time to answer questions
  - Accept participation at any level, even one word
  - Assign a buddy, same language or English speaking
- At-Risk Students -
  - Provide extended time to complete tasks
  - Consult with Guidance Counselors and follow I&RS procedures/action plans
  - Consult with classroom teacher(s) for specific behavior interventions
  - Provide rewards as necessary
- Gifted and Talented Students- –
  - Provide extension activities
  - Build on students' intrinsic motivation
  - Consult with parents to accommodate students' interests in completing tasks at their level of engagement
  - Challenge students to find the correlation between the algorithm for multiplication and the picture of division - can they figure out the algorithm?

Suggested Pacing Guide

Lesson Name/Topic	**Lesson Objective(s)**	**Time frame (day(s) to complete)**
Introduction to Decimals	Students will be able to: ● Identify pictures of decimals. ● Locate decimals on a number line	3 days

	● Write decimals in word form, standard form, and expanded notation. ● Compare and order decimals. ● Round decimals to different place values.	
Addition and Subtraction of Decimals	Students will be able to: ● Add decimals with and without regrouping. ● Subtract decimals with and without regrouping.	2 day
Multiplication of Decimals	Students will be able to: ● Multiply decimals by drawing a diagram. ● Multiply decimals by multiplying and placing the decimal point in the correct place.	2 days
Division of Decimals	Students will be able to: ● Divide decimals using a diagram. ● Distinguish between a division problem that is fair share and a problem that is equal groups. ● Identify the correct diagram to match an existing division problem.	2 days
Decimal Word Problems	Students will be able to: ● Solve word problems by multiplying and dividing decimals.	2 days
Teacher Notes: When dividing decimals, students only need to be able to complete the correct picture. Stress the difference between fair share and equal groups. Stress that when a decimal is divided by a decimal the answer is a whole number (equal groups) and when a decimal is divided by a whole number the answer is a decimal (fair share).		
Additional Resources: packet with tenths grids and hundredths grids, place value blocks, colored pencils		

Calendar Math Unit 7 - Overview	
Content Area: Math	
Unit Title: Calendar Math	
Grade Level: 5	
Unit Summary: Students will utilize a variety of math skills and extend their thinking throughout the year. Students will identify patterns and predict future patterns. Students will utilize skills such has addition and subtraction with regrouping, identifying equivalent fractions, percents, and decimals, and converting measurements throughout the year. Students will also demonstrate knowledge of 2D and 3D shapes and their relationships.	
Calendar Math Unit 7 - Standards	
Standards (Content and Technology)**:**	
CPI#:	**Statement:**
NJSLS Standards	
5.NBT.A.1	Recognize that in a multidigit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.
5.NF.A.1	Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, ⅔ + 5/4 = 8/12 + 15/12 = 23/12. (in general, a/d + c/d = (ad+bc)/bd.)
5.MD.A.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5cm to 0.05 m), and use these conversions in solving multi-step, real world problems.
5.G.A.1	Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).
5.G.A.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.
5.G.B.3	Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and square are rectangles, so all squares have four right angles.
5.G.B.4	Classify two-dimensional figures in a hierarchy based on properties.
SMP.1	Make sense of problems and persevere in solving them.
SMP.2	Reason abstractly and quantitatively
SMP.3	Construct viable arguments and critique the reasoning of others
SMP.4	Model with mathematics.
SMP.5	Use appropriate tools strategically.
SMP.6	Attend to precision.
SMP.7	Look for and make use of structure.
SMP.8	Look for and express regularity in repeated reasoning.
21st century themes and skills (standard 9)	
9.1.8.E.1	Explain what it means to be a responsible consumer and the factors to consider when making consumer decisions.
Career Ready Practices	
CRP2.	Apply appropriate academic and technical skills.
CRP3.	Attend to personal health and financial well-being.
CRP4.	Communicate clearly and effectively and with reason.
CRP8.	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP10.	Plan education and career paths aligned to personal goals.
CRP11.	Use technology to enhance productivity.
CRP12.	Work productively in teams while using cultural global competence.
Educational Technology Standards	
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.

Interdisciplinary Connection	
NJSLSA.SL.5.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
NJSLSA.SL4	Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
NJSLSA.SL2.	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally
NJSLSA.W4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Unit Essential Question(s):

- What are patterns and how can we describe them?
- What is geometry and how does it exist in my life?
- How can I use algebraic thinking to solve problems?
- How do math concepts relate to one another?
- How can I use math in my everyday life?

Unit Enduring Understandings:

- Students will define and describe patterns.
- Students will define geometry and relate it to their life.
- Students will utilize algebraic thinking to solve problems.
- Students will describe how math concepts relate to one another.
- Students will describe how math is used in everyday life.

Unit Learning Targets/Objectives:

Students will…

- Identify lines, rays, and line segments.
- Identify parallel, intersecting, and perpendicular.
- Analyze and predict patterns.
- Use geometric vocabulary.
- Think and reason logically.
- Use algebraic thinking to solve problems.
- Examine polygons.
- Identify numbers as prime, composite, and square.
- Identify acute, right, obtuse, and straight angles.
- Use algebraic thinking and notation.
- Examine isosceles, equilateral, and scalene triangles.
- Identify right, acute, and obtuse angles in triangles.
- Analyze and predict patterns.
- Utilize a picture to solve a problem.

Evidence of Learning

Formative Assessments: entrance slips, exit slips, dry erase board practice, homework collection, task cards, participation, teacher observation

Summative/Benchmark Assessment(s): quizzes, end of month tests

Alternative Assessments: modified versions of formative and summative assessments, project based assessment, oral assessment

Resources/Materials : curriculum binders, curriculum calendars, SMART board, math textbook, Every Day Counts Calendar Math, online resources such as IXL, Prodigy, Reflex, math manipulatives

Modifications:

- Special Education Student/504 -
  - Rephrase questions, directions, and explanations
  - Allow extended time to answer questions, and permit drawing, as an explanation
  - Accept participation at any level, even one word
  - Consult with Case Managers and follow IEP accommodations/modifications
  - Allow errors
- At-Risk Students -
  - Provide extended time to complete tasks
  - Consult with Guidance Counselors and follow I&RS procedures/action plans
  - Consult with classroom teacher(s) for specific behavior interventions
  - Provide rewards as necessary
  - Partner students to discuss findings

- Partner students to discuss findings
- English Language Learners -
  - Allow errors in speaking
  - Rephrase questions, directions, and explanations
  - Allow extended time to answer questions
  - Accept participation at any level, even one word
  - Assign a buddy, same language or English speaking
- Gifted and Talented Students- –
  - Provide extension activities
  - Build on students' intrinsic motivation
  - Consult with parents to accommodate students' interests in completing tasks at their level of engagement
  - Challenge students to find more patterns within the parts of the Calendar Math topics

Suggested Pacing Guide

Lesson Name/Topic	Lesson Objective(s)	Time frame (day(s) to complete)
September	Students will be able to: ● Convert fraction to decimal to percent equivalencies. ● Identify patterns. ● Reduce/Simplify fraction to lowest terms. ● Compare and analyze attributes of lines. ● Identify multiples of 2, 3, and 6. ● Identify even and odd numbers. ● Subtract multi-digit numbers with and without regrouping. ● Estimate the concept of 1,000,000 with 1,000 as a referent	1 month (approximately 20 minutes a day)
October	Students will be able to: ● Convert fraction to decimal to percent equivalencies. ● Identify patterns. ● Reduce/Simplify fraction to lowest terms. ● Compare and analyze attributes of polygons. ● Identify multiples of 8. ● Subtract multi-digit numbers with and without regrouping. ● Build arrays. ● Identify prime, composite, square numbers, square roots, and #1 as a unique number. ● Add $\frac{1}{16}$ of a whole per day. ● Convert between ounces and pounds. ● Convert between feet, yards, and inches.	1 month (approximately 20 minutes a day)
November	Students will be able to: ● Convert fraction to decimal to percent equivalencies. ● Identify patterns. ● Reduce/Simplify fraction to lowest terms. ● Identify prime, composite, and square numbers. ● Discuss the clock and movement of the hour hand and minute hand. ● Utilize clock terminology. ● Identify basic conversions. ○ Seconds in minute ○ Minutes in hour ○ Hours in day	1 month (approximately 20 minutes a day)
December	Students will be able to: ● Convert fraction to decimal to percent equivalencies. ● Reduce/Simplify fraction to lowest terms. ● Convert between centimeters, meters, and kilometers. ● Identify equivalencies between standard units of measure and metric units of measure.	1 month (approximately 20 minutes a day)

	● Utilize a rules to measure to the nearest inch and centimeter. ● Tell time on the clock to the $\frac{1}{4}$hour. ● Identify the multiples of 7.	
January	Students will be able to: ● Convert fraction to decimal to percent equivalencies. ● Identify patterns. ● Reduce/Simplify fraction to lowest terms. ● Identify, classify, and measure angles. ● Utilize a protractor correctly. ● Convert between ounces, cups, pints, quarts, and gallons. ● Tell time to the minute. ● Determine elapsed time to the minute.	1 month (approximately 20 minutes a day)
February	Students will be able to: ● Convert fraction to decimal to percent equivalencies. ● Identify patterns. ● Reduce/Simplify fraction to lowest terms. ● Classify triangles in two ways. ● Utilize the sum of angles to determine if the sum of three angles can be classified as a triangle.	1 month (approximately 20 minutes a day)
March	Students will be able to: ● Convert fraction to decimal to percent equivalencies. ● Identify patterns. ● Reduce/Simplify fraction to lowest terms. ● Identify and classify three dimensional shapes ● Utilise metric liquid capacity to measure liquid.	1 month (approximately 20 minutes a day)
April	Students will be able to: ● Convert fraction to decimal to percent equivalencies. ● Identify patterns. ● Reduce/Simplify fraction to lowest terms. ● Use algebraic thinking to solve a growing pattern. ● Utilize grams and kilograms to measure and convert between the two. ● Recognize triangular numbers	1 month (approximately 20 minutes a day)

Teacher Notes:

September	Use March pieces Page 100 in book	January	Use April pieces Page 114 in book
October	Use November pieces Page 46 in book	February	Use October pieces Page 34 in book
November	Use December pieces Page 60 in book	March	Use February pieces Page 84 in book
December	Use January pieces Page 72 in book	April	Use May/June pieces Page 126 in book

Additional Resources:

Grade 5 Every Day Counts Calendar Math by Gillespie and Kanter
Grade 5 Every Day Counts Calendar Math by Gillespie and Kanter Kit
Paper feet
Highlighter tape
Pocket chart
Funnel
Various size containers

Grams and ounces weights Balance scale Clock 3D shape models